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## **Mentor judgements and decision making in the assessment of student nurse competence in practice: a mixed-methods study**

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### **Conflict of interest**

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## ABSTRACT

**Aim.** To investigate how mentors form judgements and reach summative assessment decisions regarding student competence in practice.

**Background.** Competence assessment is a significant component of pre-registration nursing programmes in the UK. Concerns exist that assessments are subjective, lack consistency and that mentors fail to judge student performance as unsatisfactory.

**Design.** A two stage sequential embedded mixed methods design. Data collected 2012-2013.

**Methods.** This study involved a whole student cohort completing a UK undergraduate adult nursing programme (N=41). Stage 1: quantitative data on mentor conduct of assessment interviews and the final decision recorded (N=330 from 270 mentors) was extracted from student Practice Assessment Documents (PADs). Stage 2: mentor feedback in student PADs was used in Stimulated Recall interviews with a purposive sample of final placement mentors (N=17). These were thematically analysed. Findings were integrated to develop a theoretically driven model of mentor decision making.

**Results.** Course assessment strategies and documentation had limited effect in framing mentor judgements and decisions. Rather, mentors amassed impressions, moderated by expectations of an 'idealised student' by practice area and programme stage that influenced their management and outcome of the assessment process. These impressions were accumulated and combined into judgements that informed the final decision. This process can best be understood and conceptualised through the Brunswik's lens model of social judgement.

**Conclusion.** Mentor decisions were reasoned and there was a shared understanding of judgement criteria and their importance. This impression based nature of mentor decision making questions the reliability and validity of competency based assessments used in nursing pre-registration programmes.

### **Keywords**

student, assessment, competence, decision-making, judgements, nursing, mentors, mixed-methods, practice-based assessors

### **SUMMARY STATEMENT**

#### **Why is this research or review needed?**

- Reliable and valid assessment of student competence is considered critical to ensure safe professional practice at the point of registration.
- Wide ranging concerns are expressed regarding student assessment, including the phenomenon of ‘failure to fail’, where an assessor may fail, or be reticent to judge a student as unsatisfactory.
- Little is known about what criteria mentors use to guide decision making processes across student ability and by programme stage and ultimately make pass or fail decisions.

#### **What are the key findings?**

- Mentor impressions, especially first impressions have a greater effect on mentor judgements and decisions than do formal programme assessment strategies, competences and documentation.

- The criteria considered as important by mentors in any student assessment are organised around three dimensions of practice: the student as a ‘learner’, a ‘nurse’ and a ‘deliverer of care’.
- The impressionistic nature of mentor decision making, based on commonly held expectations, can best be explained through Brunswik’s lens model of social judgement.

### **How should the findings be used to influence practice/education/research?**

- In the light of the continuing limitations revealed in competence assessment of student nurses, further review and refinement of assessment criteria, tools and methods should be undertaken.
- Mentor skills in providing written, constructive feedback to students should be investigated further and findings integrated into training for mentors.
- Further research should test the applicability and utility of the developed model of mentor decision making that emerged for the competence assessment of pre-registration nursing students.

## **INTRODUCTION**

Competence assessment is widely used in undergraduate pre-registration nursing programmes to determine student achievement and eligibility for professional registration (Eraut 1994, O’Driscoll et al 2010, Cant et al 2013), with reliable assessment critical for ensuring safe professional practice (Wu et al 2015, Zasadny & Bull 2015). Assessment is routinely structured around pre-determined competences which an assessor is required to ‘sign off’ in practice (Gallagher et al 2012, Windsor et al 2012, Pijl-Zieber et al 2014). Studies examining practice assessment of students, reveal concerns regarding the consistency of decisions taken and appropriate use of programme assessment tools and pre-determined competences (Neary 1996, McCarthy & Murphy 2008, Fitzgerald et al 2010, Zasadny & Bull 2015). A further concern identified is the phenomenon of ‘failure to fail’, where an assessor

may not fail, or is reticent to judge a student as unsatisfactory (Duffy 2006, Luhanga et al 2008, Black 2011, Jervis & Tilki 2011, Brown et al 2012). Such findings challenge confidence in assessment decisions taken and question the reliability and validity of a significant career determining process.

To date, there has been little work examining the decision making processes of assessors, though this has been recommended (Duffy 2006, Black 2011) and limited understanding exists regarding competence assessment decisions across the full range of student ability and at different stages of a pre-registration nursing programme (Helminen et al 2016). This study set out to investigate how assessors form judgements and reach a summative decision when assessing student competence. As the study was undertaken in the UK, the term ‘mentor’ is used to denote a registered nurse accountable for making the assessment decision (NMC 2008, Shakespeare & Webb 2008).

## **BACKGROUND**

Review of professional standards and literature discussing international practices, reveals an increasing emphasis on determining nursing student achievement using competence frameworks (NMC 2010, Gallagher et al 2012, Windsor et al 2012, Pijl-Zieber et al 2014). Such frameworks not only guide course curricula, but determine what is to be achieved and measured in the assessment of competence irrespective of setting (Eraut 1994, Cowin et al 2008, Helminen et al 2016). They provide standards to support professional regulation and underline the priority accorded to competence assessment as a measure of student progression across placements, culminating in an assessment of a student’s fitness to practice at the point of registration (O’Connell et al 2014, Helminen et al 2014, Zasadny & Bull 2015, Helminen et al 2016). The degree of benefit that may be gained from reducing nursing practice to a list of competences to be signed off, is widely debated (Gallagher et al 2012, Windsor et al 2012).

A degree of consensus exists in the empirical literature for defining competence and thus what is being considered in any student assessment (Levett-Jones et al 2011, Heaslip & Scammell 2012, Garside & Nnemachena 2013). Most definitions identify three key elements; knowledge, skills and attitude, with assessment placing emphasis on their integration in safe and effective patient care (Yanhua & Watson 2011, Pijl-Zieber et al 2014, Sedgwick et al 2014). There is also agreement that competence when demonstrated in the real world of practice, should successfully integrate theory, practice, personal values and attitudes (Milligan 1998, Redfern et al 2002, Cassidy 2009, Pijl-Zieber et al 2014). However, literature reviews into competence assessment reveal a limited understanding of how these elements are applied to student practice assessment, or how such a conceptual understanding of competence frames assessment practice (Cowan et al 2005, Fotheringham 2010, Cassidy et al 2012, Wu et al 2015). At best empirical studies suggest that quantitative measures capture skills mastery and qualitative measures personal values and attitudes; though relationships to each other and underpinning knowledge is unclear (Cowan et al 2005, Levett-Jones et al 2011, Lejonqvist et al 2012, Sedgwick et al 2014).

Undertaking competence assessment requires time and skilled, motivated mentors (Duffy 2006, Butler et al 2011, Robinson et al 2012). Reliable and robust assessment methods are also vital for assessment to be more than a subjective and interpretive act (Watson et al 2002, Duffy 2006, Cassidy 2009, Fotheringham 2010, Zasadny & Bull 2015). International reviews question the reliability and validity of competence assessment tools and note wide variation in assessment practices (Yanhua & Watson 2011, Helminen et al 2016), with no one method established as superior (Hyatt et al 2008, McCarthy & Murphy 2008, Cant et al 2013, Helminen et al 2014, Wu et al 2015). Mentor difficulties in interpreting assessment documents and adapting programme competences to the diverse range of practice settings have been identified (Watson et al 2002, Cassidy et al 2012, Terry 2013).

Unfamiliarity with a student's programme and limited or inconsistent feedback about a student, is noted to be problematic (Duffy 2006, Fitzgerald et al 2010, Miller 2010, Cassidy et al 2012, Wu et al



2015). Finally, inconsistencies in the decision making processes of mentors have been demonstrated (Neary 1996, McCarthy & Murphy 2008, Fitzgerald et al 2010).

Nursing decision making across a range of clinical judgments and contexts, also reveals inconsistency and variability (Dowding et al 2009, Hoffman et al 2009). Decision making involves processes of judgement formation and cognitive reasoning (Banning 2008, Standing 2008, Simmons 2010).

Information, whether gathered consciously through cue acquisition or subconscious response, is key to any decision, whilst decision making strategies are influenced by the experience of the practitioner, awareness of the situation and complexity of the decision required (Hammond 1996, Standing 2008).

Judgements develop from an assessment, or belief, about a situation based on the information captured; choosing between available alternatives results in a decision (Thompson & Dowding 2002, Newell et al 2007, Hardman 2009). Reasoning strategies may be formal, such as decision analysis or information processing, informal in nature using heuristics or intuition, or a combination of formal and informal strategies, a so-called dual-processing approach (Standing 2008, Simmons 2010, Kahneman 2011, Stanovich 2011). Convincing explanations for inconsistency and variability in clinical decision making centre on heuristic use of information or mismatch between the decision strategy selected and decision task involved (Dowding et al 2009, Hoffman et al 2009, Yang & Thompson 2011).

No studies were identified that situated mentor decisions in judgement and decision making theory, despite the limited understanding of how mentors discriminate between pass / fail decisions and assess student competence across a pre-registration nursing programme. What has been considered, is the use of intuition as a reasoning strategy and how this may provide a partial explanation for the variability demonstrated in mentor decisions (Paliadelis & Cruickshank 2003, Duffy 2006, Webb & Shakespeare 2008, Black 2011). Developing a fuller understanding of how mentors make judgements using judgement and decision making theory, offered the potential for new insights into the assessment of student competence.

## THE STUDY

### Aim

The aim of the study was to investigate how mentors form judgements and reach summative assessment decisions regarding student competence in practice.

### Design

A two stage sequential embedded mixed methods design (Creswell & Plano Clark 2011) comprising a quantitative survey of student Practice Assessment Documents (PADs) followed by qualitative interviews with final placement mentors. Thematic analysis of mentor feedback in the student PADs and the mentor interviews was undertaken. Informed by pragmatism, where both objective and subjective inquiry is directed towards a truth that best represents reality whilst demonstrating a measure of utility (Feilzer 2010), these complementary methods were selected to enhance and elaborate each data set collected (Teddle & Tashakkori 2009). The quantitative survey was designed to capture the summative practice decisions made by mentors and mentor compliance with course requirements for formative and summative assessment interviews. Whereas the qualitative interviews and thematic analysis of documented mentor feedback provided detailed insights into the evidence that mentors gather about a student's practice and how they use this to inform judgements and reach a decision to pass or fail a student in practice.

### Sample and sampling strategy

The study focused on a whole cohort of students (N=41) who had completed an adult nursing pre-registration bachelor degree at one university in the North of England. All results had been considered at the final programme examination board and decisions regarding award confirmed. The cohort included 39 students receiving a degree with nursing registration and 2 students receiving a degree

without registration. All student PADS from the cohort containing feedback and assessment decisions were included (N=330 decisions from 270 mentors). All final placement mentors were considered as potential participants for the interviews. Final placement mentors were chosen first as professional standards require them to be experienced assessors, second, the immediacy of the assessment decision taken might enhance recall and thirdly their crucial role in confirming proficiency for entry to the nursing register (NMC 2008). Using a sampling frame, a purposive sample was identified from all the final placement mentors involved in assessing the student cohort (Miles & Huberman 1994, Yin 2003). Sampling was determined based on the mentor decision taken (pass / fail), mentor compliance with formative weekly meetings requirements in the final placement (NMC 2008), any practice concerns raised and overall achievement of the student (degree classification). This approach was based on the assumption that different processes may be used for the different types of decision taken (Standing 2008, Stanovich 2011).

### **Ethical considerations**

Research Ethics Committee approval was obtained from the university where students had completed their degree and where the principal investigator (SB) was based. Research and development governance approval was obtained from healthcare provider organisations where mentors were employed (Ref: NP/0088 and NU 12/10136) in compliance with UK NHS integrated research ethics standards for studies involving staff.

### **Data collection**

Data were collected in 2012 – 2013.

### *Stage One – Quantitative Survey*

Data collection began with a quantitative survey of student cohort PADs. The survey tool was constructed to align with mentor assessment practices and, programme and professional body (NMC) requirements. As PADs are considered to be the professional record demonstrating a mentor's accountability in competence assessment (Duffy 2006, McCarthy & Murphy 2008, Fitzgerald et al 2010), the survey tool extracted data related to the assessment decision taken, whether concerns regarding the student had been recorded and if the university was notified during the placement. Information regarding mentor conduct of formative and summative assessment interviews was also noted as this is required by the regulator for UK nursing programmes leading to registration (NMC 2008).

### *Stage Two – Qualitative data*

Mentor feedback from the formative and summative assessment interviews in all the student PADs, was extracted and transcribed verbatim. Individual interviews with final placement mentors were undertaken. The student PAD completed by the final placement mentor was used as an artefact to stimulate recall and access the reasoning underpinning the decision making associated with the mentor's judgement about the student's competence. These were audio recorded and transcribed in full. Stimulated Recall Interviews are considered superior to standard post-event interviews, as the connection that an artefact can provide to the event triggers recall and articulation of the cognitive processes associated with the original decision (Lyle 2003, Dempsey 2010, Burden et al 2015). A set of interview prompts was constructed to guide mentor interpretation of the artefact and facilitate discussion of student development during the placement and the competence decision reached. This approach was informed by decision making theory (Newell et al 2007) and a pilot study where, process and practice information contained in student PADs was extracted and commonalities observed.

## **Data analysis**

In Stage One, results of each theory and practical course component were entered into a grid. Overall pass and fail rates were calculated and quantified as a percentage and linked with individual student identifiers. Process data identifying timing of formative and summative assessment interviews were entered into a placement grid and frequencies and percentage frequencies calculated. Through processes involving assigning numerical values and organising and synthesising data from examination board spreadsheets and student PADs, trends could be discerned (Creswell & Plano Clark 2011).

In Stage Two, mentor comments transcribed from the student PADs along with the transcripts of the mentor interviews, were analysed as independent data sets using Braun & Clarke's (2006) six stage approach to thematic analysis. Thematic maps representing relationships in each data set were developed and frequency codes for themes identified were quantified (Attride-Stirling 2001). Absolute code frequencies were then calculated to obtain a measure of prevalence and sense of how important the codes and themes were to the overall research question (Braun & Clarke 2006, Guest et al 2012).

At Integration, independent and integrative analysis of the available data sets was undertaken. Informed by a parallel mixed data analysis technique, results were connected and merged. Inferences made in response to the results from each phase were correlated and compared for the purpose of forming meta-inferences (Teddle & Tashakkori 2009).

## **Rigour**

To support evaluation of the quality of the inferences, an audit trail of actions, decisions and outputs regarding study design, data collection and analysis was developed (Burden 2014). Specific criteria suggested for mixed methods studies provided the overall framework for evaluation of the study

(Creswell & Plano Clark 2011). With respect to qualitative data analysis, peer debriefing played a significant role in establishing the quality of the interpretations made (Cutcliffe & McKenna 1999, Graneheim & Lundman 2004).

## RESULTS

### Stage One

Survey results indicated several areas where student assessment may not be conducted in line with programme standards (Figure 1). Placements 1-3 occur in the first year of the programme, placements 4-6 in the second year, placements 7 and 8 in the final year. Of particular note were the delays experienced by students in placements 1 and 2 in agreeing preliminary development plans and receiving feedback at the placement midpoint. Closer examination of placements where a ‘concern’ was raised or a ‘fail’ decision recorded revealed 25.2% of preliminary interviews were conducted late, against a study mean of 50.3%; suggesting better if not perfect mentor practice occurred when faced with a poorly performing student.

### Stage Two

#### *Student PADs*

Thematic analysis revealed what mentors identified as salient in judging student competence. These were organised into three themes: the student as a ‘Learner’, a ‘Deliverer of Care’ and a ‘Nurse’. The thematic map (Figure 2) presents a representation of the organising themes, themes and frequencies.

The student as a ‘Learner’ characterises the student’s participation in practice, enthusiasm, questioning and incremental development. Evaluation of a student as a ‘Deliverer of Care’, articulates the student’s ability to demonstrate and perform key skills in a proficient and confident manner.

Finally, an element of any overall mentor judgement involves assessment of the student as a 'Nurse'; reflecting their ability to fit in and work with the nursing team in a professional manner. These dimensions of mentor evaluation are clearly illustrated in the following comment from mentor 'AK' recorded for 'Jenny', a final placement student who unfortunately failed:

'Sadly 'Jenny' didn't meet the benchmarked criterion to pass... Competences which require further development include: 1. Essential skills, BP monitoring, communication. 2. Professional issues: punctuality and dress code. Concerns were raised with regard to basic care planning, basic nursing procedures and infection control.'

The weight given by mentors to the three organising themes varied (Figure 3). The student as a 'Learner' was the least important facet of any mentor evaluation. Indeed, over the final eighteen months of the programme (placements 6-8), mentors consistently prioritised their judgements in rank order as a 'Deliverer of Care', a 'Nurse' and finally as a 'Learner'.

#### *Mentor Interviews*

Thematic analysis provided insights into the 'how' and 'why' aspects of mentor decision making. Emerging codes (Figure 4) indicated that mentor assessment practice involved the dual responsibilities of managing the practice learning experience (process codes) and assessing a student (judgement codes). Three activities, were involved in management of the practice learning experience: supervision and assessment, learning and development and feedback. Professionally, close supervision and observation of a student is expected (NMC 2008). The level of direct supervision was variable and at times did not fully comply with required standards, yet mentors remained prepared to be accountable for any assessment decision made. Through the process of agreeing objectives at the beginning of a placement, mentors formed initial judgements of a student as 'good' or 'not so good'. Students who appeared able to organize themselves and understood what they needed to achieve, particularly with respect to clinical skills, provided a positive image, whereas the converse created a detrimental impression:

‘I think generally we look a lot at the skills book, to see where they are at, especially for the final placement you would expect them to be more or less completed. She was quite vague about why they weren’t done, ‘I thought I’d get round to it’, so we were concerned from the start that the skills book was so empty.’ (Mentor ‘AE’)

Formation of mentor judgements occurred early in a placement. Concerns about a student triggered earlier midpoint interviews with closer management and supervision of student learning. In contrast to the priority given to proficient performance of clinical skills outlined in a separate Skills Workbook, judgements about the competences detailed in the student PADs appeared to be an ongoing process. PADs had a limited influence on the management of the learning experience or the assessment decision made. This was particularly evident in the documents of failing students where non-completion of reflections by students on their competence in the PAD seemed not to contribute to any concerns raised by the mentor with the university, or influence the final decision.

The interplay between expectations, impressions and decision criteria was also critical to understanding a mentor’s decision. First impressions of a student guided mentor evidence gathering, management of assessment and contributed to the final decision. The importance of first impressions is clearly indicated in the following comment from mentor ‘G’ assessing ‘Jenny’ when she undertook re-assessment of the final placement in a different clinical setting:

‘She was really positive... and I was quite impressed at how prepared she was... And even from the beginning, I said, from what I have seen so far, barring an absolute disaster, you will get through this placement.’

That mentors often reached a decision early in a placement about whether a student would be successful is illustrated in this comment from a different mentor ‘M’:



‘You can actually tell. You correctly tell who's going to pass and who is going to struggle... I couldn't give a time limit, but the first few weeks will give you a clue. And by midpoint you are confident.’

Expectations framed the impressions mentors formed about a student and recognized the student's stage in the programme:

‘As a first-year student say you are doing a dressing with them or something, is their aseptic technique good? That's fine and they've done the dressing and then you give them feedback and say that they did that really well, their aseptic technique was spot on but what else do we need to be thinking about? As a third-year student I'd expect them telling me about what they are looking for, so they're assessing the wound before, rather than just going on what the other nurse put on, or just reading the care plan’. (Mentor ‘J’)

Safety was a key expectation and students were expected to ‘recognise the abnormal from the normal’ and know what to do irrespective of stage. By the final placement mentors expected students to act with confidence:

‘The ‘X’ factor..... It's about confidence, it's about.... They understand what needs to be done and why it needs to be done and they can prioritise their shift and their time within the shift and their jobs to do and their communication skills. I think they are a few things and it is glaringly obvious when one of those is missing.’ (Mentor ‘I’)

The part that expectations played in a decision to pass or fail a student is evident in the following mentor comment:

‘The first year you might give them the benefit of the doubt. Whereas with third years, it is their third year and sometimes if people haven't told them what is expected of them, they get to their third year and all of a sudden it is 'this person is going to be qualified soon and they are just not up to scratch'. But yet in their first year you think all right then, we'll give them the benefit of the doubt and see how they develop you know, in their next placement.’

(Mentor ‘N’)

### **Integration**

Comparative analysis clarified understandings of mentor decision making in several areas. Firstly, mentors consistently judged students on similar criteria. Those considered important in the final placement interviews (e.g. competence, communication, confidence, medicines and care management, team member), were also recorded in the mentor feedback in the student PADs. Secondly, mentors placed increasing importance on evaluating a student’s performance in terms of their ability to deliver care. This was particularly notable in the final placement.

‘they are right to look after a group of patients and can run a ward’ (Mentor ‘I’)

and that they should be able to

‘think about how their shift runs, in terms of getting jobs done and prioritising care’

(Mentor ‘P’)

Finally, mentor’s decisions of a student’s competence were anchored by an appraisal of the student working within their limitations whilst contributing as a member of the team.

‘She has always alerted staff when unsure or when she is aware of abnormalities’

(Mentor ‘AO’)

‘I think part of liking them comes from knowing that they are reliable and you can

call on them for things and they are confident and they are talking to you and

wanting to be involved with things’ (Mentor ‘G’)

Combined, these findings contributed to an understanding of mentor decisions as the product of judgements made about students based on impressionistic information, using consistent and systematic decision making processes (Newell et al 2007). Mentor judgements were revealed as social judgements, arising from an evaluation of what was noticed about a student around a criterion framework, a mental map, underpinned by generic mentor expectations of student practice. These reflected beliefs about the current and future potential of the student; beliefs which were able to be accommodated across the full range of placement settings and the whole student programme. Expectations captured individual criteria and their inter-relationships, for example working within limitations whilst working reliably as a team member, which contributed to an overall picture of competence to support a final decision that a student is ‘safe enough to pass’ and at the end of the programme is ‘fit for registration’. This mental map can best be understood and conceptualised through Brunswik’s (1952) lens model of social judgement (Figure 5). The left hand side represents the real world of what is to be judged, in this case the student’s competence in practice. The right hand side represents the mind of the judge and the nature of the decision to be taken, thus whether a student is ‘safe enough to pass’ and be registered. The cues are the key criteria mentors consider important, gather information (impressions) about and evaluate, to inform and support their final decision.

## DISCUSSION

Mentor decision making, captured in the theory informed model (Figure 5), is impressionistic in nature and directed by generic, pre-existing expectations of a student and their practice. Mentors have a shared construction of student competence across a programme and value achievement of clinical skills. However, this poses a difficulty as the mentors' frame of reference is not always congruent with programme and professional standards. In addition, though mentors will use prescribed assessment processes when needing to raise a concern where a student is not meeting expectations, generally mentors pay only lip service to assessment documentation and processes. Such findings question the reliability of competence assessment decisions made by mentors and support concerns expressed elsewhere (Duffy 2006, Fitzgerald et al 2010, Black 2011, Brown et al 2012).

Findings revealed in the study can be considered germane, as they were embedded in and emerged from a rigorous investigation of the assessment processes and criteria in use. Significantly they resonate with wider, enduring and, often problematic processes and practice involved in signing off competences within a prescribed competence framework (Neary 1996, Redfern et al 2002, McCarthy & Murphy 2008, Fitzgerald et al 2010, Gallagher et al 2012, Windsor et al 2012, Pijl-Zieber et al 2014, Zasadny & Bull 2015). PAD completion by mentors was patchy, with close to 23% of assessments in some placements failing to record achievement of competence at midpoint interview; a programme requirement. Unsurprising given it was a task often viewed as time-consuming, performed to satisfy the university rather than benefitting the assessment decision. Difficulties mentors' encountered interpreting the language used in documentation and applying the programme competences to their own area of practice, are reported elsewhere (Cassidy et al 2012, Terry 2013). This suggests that assessment tool design, may neither be the root cause of the problem or solution.

Accepted Article

Assessment tools represent a particular conceptualisation of competence, both in the language used and the nature and range of competences presented for assessment (Watson et al 2002, Cassidy et al 2012). Many tools at best are no more than blunt instruments requiring interpretation of competence, assessment and completion along a check-box model which places emphasis on functional characteristics and clinical skills (Girod 1993, Gonzi 1994, EdCaN 2008, Terry 2013, Sedgwick et al 2014). Such pedagogical and regulatory discourses may be at odds with the impressionistic, mentor generated, criterion based conceptualisation of competence revealed in the mentor decision making model developed and offers an explanation why assessment tools are not integral to mentors' decision making (Terry 2013, Zasadny & Bull 2015). Devising assessment tools more closely aligned with mentor conceptualisations, may make decision making criteria explicit, articulate the relationship of criteria to decisions made and support more reliable and valid methods of competence based assessment.

The role that mentor expectations play in competence assessment, is not novel (Duffy 2006, Black 2011). However, what this study and the decision making model developed reveals are the criteria used, their ranked relative importance and the consistency with which they are applied, across the full range of assessment decisions examined. Such consistency, reveals a shared view about the performance of a competent student, one less varied than commonly assumed (Zasadny & Bull 2015). These common expectations may be a consequence of a professional socialisation process experienced by the mentor when a student (Ousey 2009). Indeed, when compared with other student assessment studies, these mentor expectations reflect continuing and consensual professional views regarding the essence of nursing practice (Mazhindu 1995, Brown 2000, Duffy 2006, Webb & Shakespeare 2008, Black 2011, Windsor et al 2012, Jinks et al 2014).

The degree of shared agreement and weighting of criteria suggests that the mentor decisions examined in the study, can be considered meaningful and have utility. The decision making literature would support such a claim, suggesting human judgements are generally good enough, if subject to a degree

of variation (Hammond 1996, Standing 2008, Kahneman 2011). Though mentor decisions may at times lack consistency or precision, by using a mental map, a professional and normatively constructed decision making model (Figure 5), mentors are demonstrating context specific reasoning in deciding whether to pass or fail a student (Hammond 1998, Standing 2008, Hardman 2009). Given that professional judgements are relied on daily in practice, the hesitancy to allow such professional judgements in relation to educational assessment may be unfounded. Further development and testing of the mentor decision making model (Figure 5) across a broader range of programmes may offer possibilities for more reliable methods for student assessment than currently exist.

Though the mentor decisions in the study can be considered reasonable, this may not be supported with evidence. In some cases, the documented evidence was sparse; perhaps indicative of a reticence to *'put pen to paper'* (Duffy 2006). For instance, examination of mentor comments contained in the PADs suggested that students, who at some stage received a fail decision in practice, received less documented mentor feedback across all placements irrespective of decision. In addition, mentor expectations were shown to be less rigorous in year 1 of the programme, or when students were allocated to specialised areas e.g. critical care. Consequently, mentors may have failed to challenge a 'weak' student sufficiently, or accorded a degree of leniency in reaching a decision. This ultimately has a cumulative effect when coupled with increasing expectations and scrutiny in the final placement of the programme and may increase the likelihood of a weaker student failing in practice, as was the case in this study. Developing assessment criteria, articulating clear expectations by stage of programme, alongside improving the written feedback skills of mentors, may ameliorate such an outcome.

### **Limitations**

The study examined mentor decision making for one adult nursing pre-registration cohort from one English university. This may limit the transferability of the findings. However, a mixed methods design capturing all mentor decisions across a three-year programme for a whole student cohort

provides some confidence to the findings. Limitations of the documented evidence for several students, may limit the credibility of some conclusions drawn and merits further investigation.

## CONCLUSION

This study, underpinned by decision making theory, contributes to existing understandings of competence assessment and provides further explanation for variability demonstrated in mentor decisions. Mentor judgements are revealed to be social judgements arising from a shared mental map of expectations of competent practice. The model that emerged illustrates how criteria and their relationships become integrated into a summative decision that a student is '*safe enough to pass*' and by the end of the programme '*fit for registration*'. Though a small scale study, the notion of holistic competence revealed (Maben et al 2012), grounded in actual mentor decision making practices and theory offers the potential to contribute new approaches to competence assessment. However, areas of concern remain. The limited effect that assessment tools have on framing assessment decisions, combined with low expectations early in a student's career may reduce opportunities to intervene early with weak students. The challenge is to understand these concerns better so that any actions taken impact on areas of greatest risk, to produce a student who, at the end of their studies is '*fit for registration*'.

### Author Contributions:

All authors have agreed on the final version and meet at least one of the following criteria (recommended by the ICMJE\*):

- 1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
- 2) drafting the article or revising it critically for important intellectual content.

\* <http://www.icmje.org/recommendations/>

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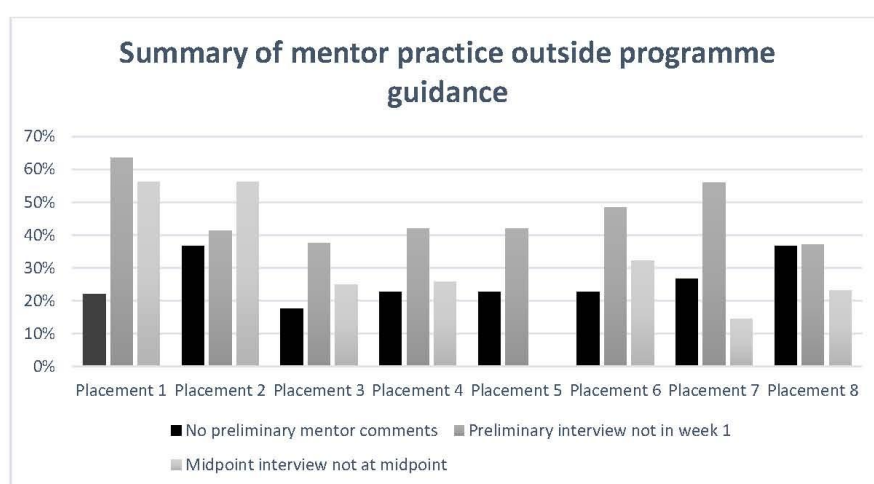
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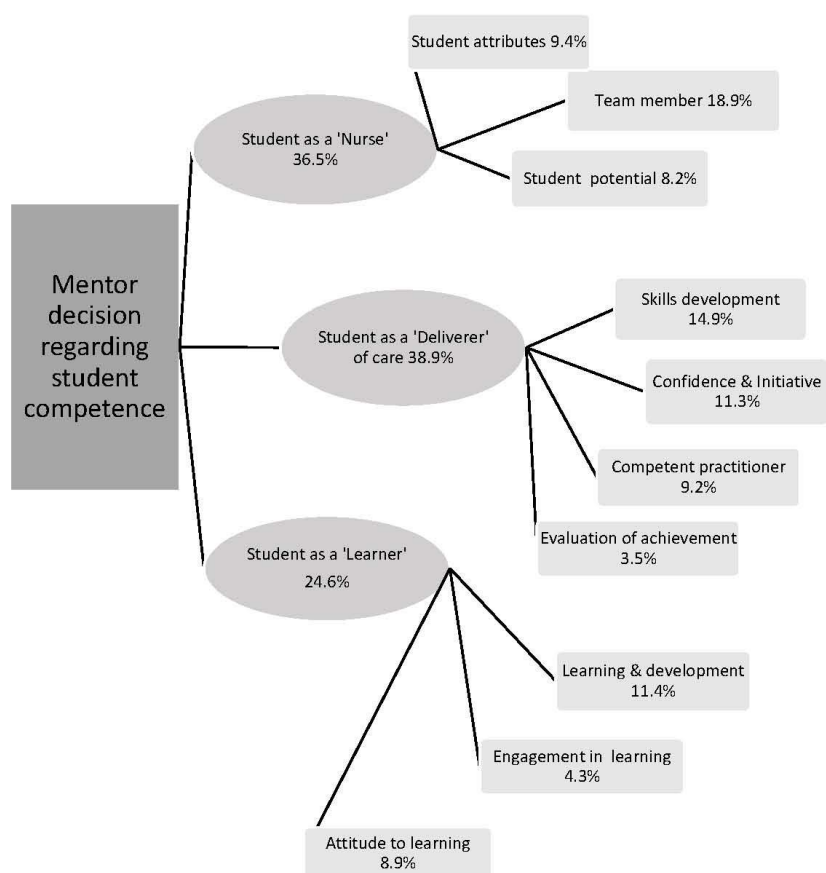
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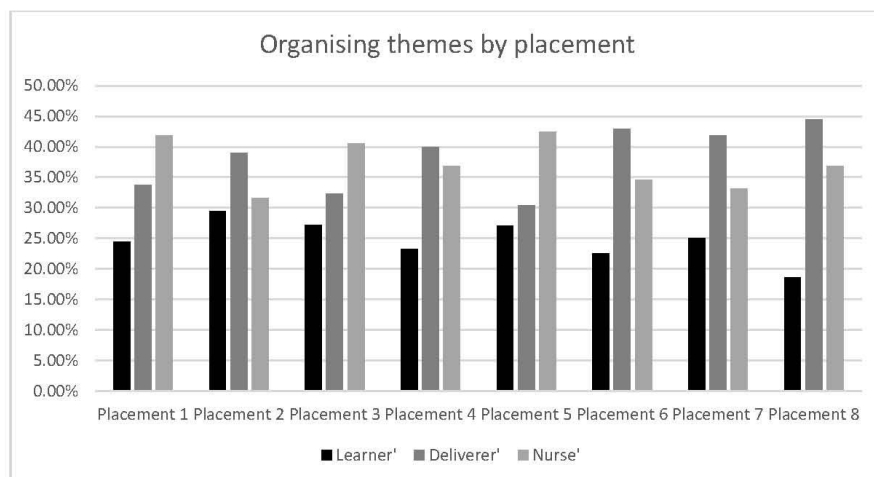
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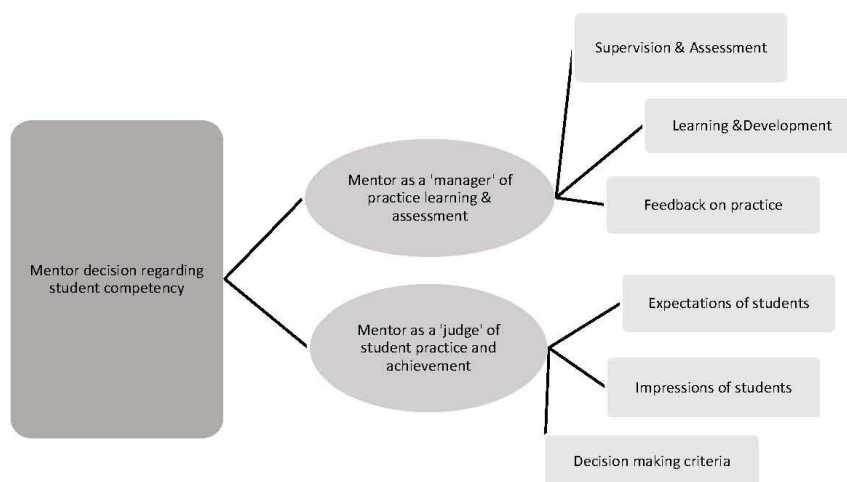
**Figure 1** Summary of mentor practice across the programme



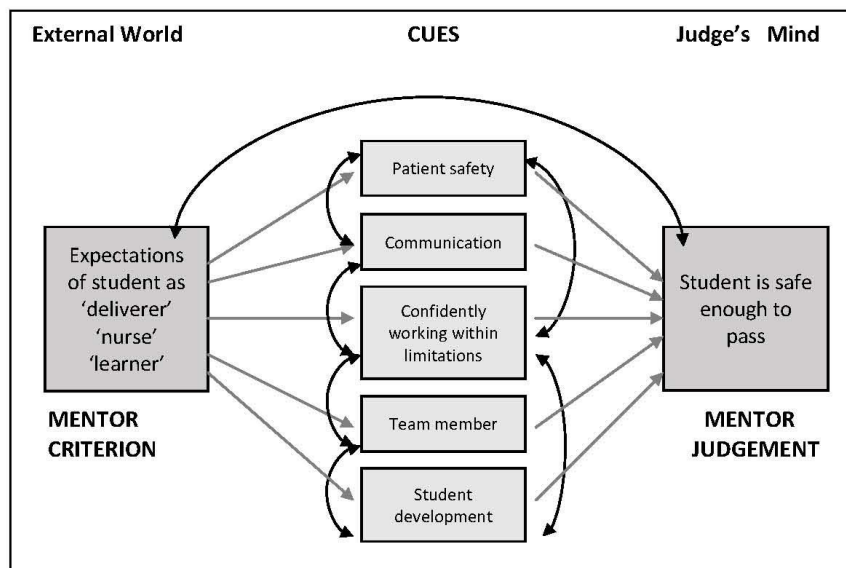
**Figure 2** Thematic map showing Organising themes, themes & frequencies of mentor comments extracted from student PADs



**Figure 3** Organising themes by placement



**Figure 4** Thematic map showing organising themes and themes from Stimulated Recall mentor interviews



**Figure 5** Theoretical model of mentor judgements and decision making